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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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Before the Atomic Safety and Licensing Board

In the Matter of
Philadelphia Electric Company)
(Limerick Generating Station,) Docket Nos. 50-352,
Units 1 and 2) 50-353

COMMONWEALTH OF PENNSYLVANIA'S
RESPONSE TO "REVISED ISSUES OF CONCERN
OF THE CITY OF PHILADELPHIA IN THE AREA
OF EMERGENCY PLANNING"

Pursuant to the Licensing Board's oral directive on the record of this proceeding (Tr. 9894), the Commonwealth of Pennsylvania hereby responds to the City of Philadelphia's revised issues of concern regarding offsite emergency planning.

CITY-1

CITY-1 contends that the Commonwealth's emergency response plan for Limerick does not provide adequate assurance that the public in the ingestion exposure pathway emergency planning zone (EPZ) will be protected from consumption of contaminated foodstuffs for the reason that the State plan does not identify the access control points (ACP) surrounding the Limerick plume exposure pathway EPZ and does not assure that those ACPs "will be adequate."

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CITY-1, in the Commonwealth's view, is limited in scope to one particular matter, as explained herein. In negotiations between the City and the Commonwealth on offsite emergency planning issues, the City raised the hypothetical circumstance where an open, uncovered vehicle carrying raw agricultural products might be traveling in the plume exposure pathway EPZ at the time a general emergency is declared, and that such a vehicle might exit the plume EPZ and bring possibly contaminated products into the City. Accordingly, as noted in the City's April 23, 1984 "Status Report" on emergency planning issues, the Commonwealth agreed to incorporate in its planning a procedure whereby all open, uncovered trucks containing raw agricultural products would be stopped at access control points surrounding the plume EPZ. State personnel at the AC

Ps would then contact the state Department of Agriculture, which would dispatch appropriate staff to that ACP to sample the raw agricultural products for radioactivity and dispose of such products in accordance with established procedures. The Commonwealth therefore reads CITY-1 as limited to the question of whether there is reasonable assurance that this procedure with regard to sampling of raw agricultural products can be accomplished. We think that it can be.

"access control points" as:

Control Points manned primarily by State or municipal police, augmented as necessary by the National Guard, established around the perimeter of the plume exposure pathway EPZ on roads leading into it when it is evacuated or occupants are taking shelter for the purpose of controlling access into the area.

The planning process for designating access control points (ACP) is as follows. The ACPs will be identified in the risk county radiological emergency response plans, rather than the State plan. This is consistent with NREG-0654, Part II, Criterion J.10(j) which requires that state and local emergency response plans provide for "control of access to evacuated areas and organization responsibilities for such control." The three risk counties included in the Limerick plume EPZ will designate, in their respective emergency plans, ACPs within their jurisdictions. PEMA will review the ACPs as part of its review of the revised risk county plans, and will coordinate the activation of the ACPs as appropriate. See Annex E at E-25. Access control points located on main evacuation routes will be staffed by the Pennsylvania State Police. Access control points on roads other than main evacuation routes will be staffed by local police. The Pennsylvania State Police, in coordination with other state agencies and risk and support counties, will "implement procedures to control the orderly movement of people from the plume exposure pathway EPZ," and implement controls on access control points as coordinated by PEMA. Annex E at

E-27. It must be recognized that the Pennsylvania State Police does not have sufficient resources to man each

egress point from the plume EPZ. Consequently, the Commonwealth must depend upon the respective risk counties to assume some responsibility for access control.

With regard to sampling of raw agricultural products, the Commonwealth, as the City is aware, has agreed that Pennsylvania State Police will stop open, uncovered trucks containing raw agricultural products from exiting the plume exposure pathway EPZ at access control points manned by the State Police. The Commonwealth will discuss with the risk counties the propriety of implementing a similar procedure regarding raw agricultural products at access control points not manned by State Police. The state Department of Agriculture will respond to a call for assistance in this regard from emergency response personnel at either the state or local level. At least some of the Limerick plume EPZ ACPs will be activated during the upcoming July 1984 exercise of the emergency plans so that the adequacy of this procedure may be assessed.

On the basis of the foregoing, the Commonwealth believes state and local emergency organization plans provide reasonable assurance that the City will be protected from contaminated foodstuffs, and that access control points surrounding the Limerick plume EPZ will be adequate in accordance with NUREG-0654, Criteria J.10(j) and J.11.

CITY-3

CITY-3 contends that the Commonwealth's emergency response plan provides for sampling and notification associated with water contamination, but does not provide sufficient and adequate guidance for: (a) protecting existing supplies from contamination; (b) preventing the use of contaminated water; and (c) alternative sources of water for the City of Philadelphia.

As a general matter, the Commonwealth's emergency plan, Annex E, Appendix 17 provides that the Department of Environmental Resources, Bureau of Radiation Protection, will "conduct accident assessment and recommend protective actions to prevent the consumption of radiocontaminated food and water to the Department of Agriculture and the Department of Health." DER's Bureau of Community Environmental Control is responsible for sampling water from appropriate public reservoirs, water intake points, and water supply systems, and for maintaining plans for timely notification of downstream water companies regarding water resource contamination. DER's Bureau of Water Quality Management samples surface and ground waters, and the agency's Bureau of Laboratories conducts or arranges for laboratory analyses of potentially radiocontaminated public water supplies. Appendix 17, Section III.A.2, p. E-17-3.

See also id., Section IVB, p. E-17-5.

The City contends that without a water transport model, the Commonwealth's emergency response plan does not demonstrate the capability and means of implementing protective measures with regard to the City's water supply. To the contrary, the lack of such a model for the Schulkyill River does not impede the Commonwealth's ability to assess the impact and consequences on the City's water supply of contaminants from an incident at the Limerick facility. As to liquid discharges -- as the City is aware, the DER Bureau of Radiation Protection (BRP) has developed, and is in the process of finalizing, a procedure that estimates the consequences of a liquid release of contaminants on downstream water users. BRP will utilize that procedure to determine the dilution factor at the outfall and the travel time of the contaminant to downstream users. Based on that procedure, the Commonwealth will recommend whether the City should close its intakes on the Schulkyill given the concentration of a particular spill. As to water contamination resulting from precipitation or run-off of radiological contaminants released into the air, the Commonwealth's plan provides for sufficient monitoring of the airborne plume, with federal Department of Energy support, to assess the concentration and direction of the plume, and from those measurements to assess location and concentration of eventual ground

deposition of the airborne contaminants. Those measurements provide a sufficient basis for assessing the severity of water contamination even for the most severe radiological event at Limerick. In addition, in the severe accident scenario involving an airborne release, the state plan provides for water sampling downriver in any event. Therefore the Commonwealth's plan contains adequate means for assessing the consequences of either a liquid discharge or airborne release accident at Limerick on the City's water supply.

The Commonwealth agrees with the City that a water transport model would be an important supplement to both the state and the City's emergency planning capability. The Commonwealth however does not have the resources to prepare such a model. The Commonwealth believes its present capability for assessment of water contamination satisfies the requirement that its plan for the ingestion exposure pathway EPZ be capable of preventing the public in that area from consuming contaminated water.

The City contends further that the Commonwealth's plan does not provide for sampling to commence at a sufficiently early stage. The Commonwealth has represented that it will commence sampling when it becomes aware of an "abnormal discharge" into the Schulkyill. The Commonwealth defines such a discharge as one involving the release of liquid

radioeffluents significant enough to be classified as an Unusual Event, and therefore appropriate state agencies would be notified of the occurrence by the Applicant. Generally, the NRC has defined the level of such a discharge in the case of other nuclear reactors as one "Maximum Permissible Concentration" (MPC) at the outfall, pursuant to U.S. EPA National Primary Safe Drinking Water Interim Standards. Should there be any reason for concern regarding water quality, the Commonwealth will notify downstream water users and recommend curtailment of intake. The Commonwealth would in such a case continue sampling and analysis, with a report back to water suppliers. The NRC has approved the "one MPC" criterion with regard to other nuclear reactors, and therefore the Commonwealth believes its procedure for commencing water sampling and issuing advisories to appropriate agencies adequately protects the City.

The City also contends that the State's plan fails in that it does not "provide alternative sources of water for Philadelphia." The thrust of the City's concern here is not explicit. The Commonwealth's emergency plan, Annex E, Appendix 12, Section 9.8.8, p. E-12-41, discusses protective action guides for drinking water. The plan advises how drinking water may become contaminated, either by accidental discharge of contaminated water, or through accidental discharge to the atmosphere with "subsequent

deposition on the surface of reservoirs and cistern collectors as well as despotition on land with subsequent runoff to surface water supplies." Concerning liquid discharges, the plan advises that contamination of drinking water supplies is possible only for those downstream water supplies using the receiving water body for makeup. The plan indicates that contamination from liquid discharge may be avoided by "curtailment of intake during the course of the passage of the contaminated water." Appendix 12, Section 9.8.8, p. E-12-42. With regard to atmospheric discharges, the plan notes that deposition of airborne contaminants on water surfaces is more difficult to assess. The plan outlines the protective action guide for drinking water as the U.S. EPA National Interim Primary Drinking Water Regulations, Appendix B and describes the concentrations at which protective actions are appropriate given the type of discharge and stating the associated organic dose commitment. Id. at E-12-42.

The Commonwealth has also advised the City of possible short-term water supply alternatives it might choose to pursue should the Schulkyill River become unavailble. The State's Water Supply Plan developed by the Department of Environmental Resources also outlines options for alternate water supplies that the City might choose to follow. Regarding water rationing, the Commonwealth has developed a "Local Water Rationing Plan" available for use by local

governments in emergency conditions. That plan is designed to establish measures for essential conservation of water resources, provide for equitable distribution of limited water supplies and to assure sufficient water is available to protect the public health and safety in the affected area. And, as stated in the City's revised issues, the State is willing to working with the City and the Applicant regarding development of a City-specific alternate water supply plan; the Commonwealth at present does not have the resources to develop such a plan on its own.

The Commonwealth's emergency response plan and the guidance available through state water officials and the state's water supply plan provide sufficient guidance for the City to plan for a radiological incident at Limerick that might render the Schulkyill River unavailable. The Commonwealth is not legally obligated under NRC regulations to supply the City with an alternative supply of water should the Schulkyill River become unavailable as a result of an accident at Limerick. The Commonwealth has executed appropriate planning for the ingestion exposure pathway EPZ in accordance with 10 C.F.R. 50.47(b)(10) and NUREG-0654, Part II, Criterion J.11.

CITY-7

CITY-7 concerns the Commonwealth's plan with regard to

decontamination of the City's water supply during recovery and re-entry. The Commonwealth's plan, Annex E, Appendix 12, Section 12.3, p. E-12-58 advises with regard to reinstatement of milk, produce and water during recovery that controls may be lifted when the release is terminated, when concentrations of contaminants are declining and when the dose commitment from residual contamination will not produce a total dose commitment in excess of 1 Rem. The Commonwealth has adequate measurement capability to determine when controls on water may be lifted. The Commonwealth's plan in Appendix 12, Annex 10-A on managing radiocontamination also provides general advice as to how to avoid ingestion of contaminated water.

In addition, as the City indicates, the Commonwealth has provided the City with technical reference material on decontamination of water supplies. The matter of water supply decontamination is one that has not, to the Commonwealth's present knowledge, received extensive treatment in scientific or engineering literature, and therefore the Commonwealth's emergency plan does not contain more explicit information on the topic. The Commonwealth has provided the City with all relevant information it has identified to date on this issue, and continues to investigate the area.

The Commonwealth believes it has provided sufficient

guidance in its emergency plan with regard to decontamination of water given the limited state of the art knowledge. As in the case of provision of alternate water supplies, the Commonwealth believes it is not legally obliged under NRC regulations or guidance to accomplish decontamination of the City's water supply in the event of a radiological event at Limerick. The Commonwealth believes its emergency plan in its current adequately protects the public in the ingestion exposure pathway EPZ from ingestion of contaminated water.

CITY-9

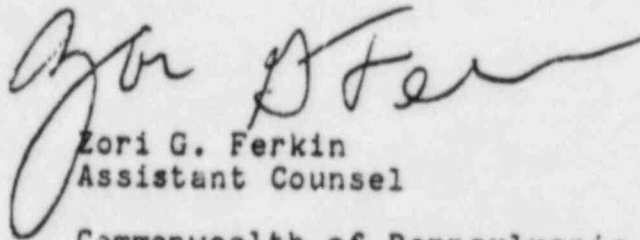
Attached to this response is a copy of an agreement between the Applicant and the Commonwealth of Pennsylvania, through the Pennsylvania Emergency Management Agency, regarding state/Philadelphia Electric coordination of response to nuclear incidents at Limerick. This agreement is similar in content and scope to agreements executed between the state and other nuclear facilities with which the Commonwealth has an agreement, and fulfills the requirement outlined in NUREG-0654, Part II. Criterion A.3.

Conclusion

The Commonwealth believes its emergency response plan provides reasonable assurance that protective measures for

the ingestion exposure pathway EPZ can and will be taken. The Commonwealth is willing as always to discuss particular matters of concern with the City with regard to emergency planning, but does not believe the City's revised issues of concern are appropriate for litigation in the instant proceeding.

Respectfully submitted,

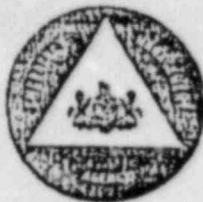


Zori G. Ferkin
Assistant Counsel

Commonwealth of Pennsylvania
Governor's Energy Council
300 N. 2d Street 11th Floor
P.O. Box 8010
Harrisburg, Pa. 17101

Date: June 4, 1984

Attachment



PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105



February 29, 1984

Mr. Shields L. Daltroff
Vice President, Electric Production
Philadelphia Electric Company
2301 Market Street
Philadelphia, Pennsylvania 19101

Dear Mr. Daltroff:

1. This letter constitutes a mutual Statement of Agreement between the Commonwealth of Pennsylvania and the Philadelphia Electric Company regarding state/facility coordination of response to nuclear incidents at the Limerick Generating Station.
2. The Commonwealth of Pennsylvania has established its basic plan for emergency operations in the "Commonwealth of Pennsylvania Disaster Operations Plan." Annex E, "Fixed Nuclear Facility Incidents," to the Disaster Operations Plan details emergency response to incidents at nuclear power facilities located within the Commonwealth.
3. The Montgomery, Chester and Berks County Emergency Management Agencies have established, in coordination with the Pennsylvania Emergency Management Agency, Radiological Emergency Response Plans for the Limerick Generating Station.
4. The Philadelphia Electric Company has established a site-specific emergency plan in the "Limerick Generating Station Emergency Plan," compatible with Annex E.
5. The Pennsylvania Emergency Management Agency and the aforementioned County Emergency Management Agencies shall initiate and conduct appropriate and timely response to incidents occurring at the Limerick Generating Station, as detailed in the state and county radiological emergency response plans, to include notification by and coordination with the Philadelphia Electric Company.
6. Upon occurrence of an UNUSUAL EVENT, ALERT, SITE EMERGENCY or GENERAL EMERGENCY at the Limerick Generating Station, initial notification by the facility and, subsequently, by designated emergency response agencies and organizations shall be accomplished in accordance with Appendix 7, "Notification Procedures," to Annex E.
7. Continuing coordination during an incident shall be accomplished in accordance with Appendix 7, "Notification Procedures," to Annex E.

Mr. Shields L. Daltroff
February 29, 1984
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8. The physical means of communication for response to an incident shall be established and utilized in accordance with Appendix 6, "Communications," to Annex E.
9. The Philadelphia Electric Company is on the distribution list for the "Commonwealth of Pennsylvania Disaster Operations Plan" and for Annex E, "Fixed Nuclear Facility Incidents," to the Operations Plan and shall receive changes to such plans as changes are issued.
10. The Pennsylvania Emergency Management Agency is on the distribution list for the "Limerick Generating Station Emergency Plan," and shall receive changes to this plan as changes are issued.
11. The Philadelphia Electric Company shall review annually Annex E to the Operations Plan and provide written suggested revisions to the Pennsylvania Emergency Management Agency as deemed appropriate and necessary by the Company.
12. The Pennsylvania Emergency Management Agency shall review annually the "Limerick Generating Station Emergency Plan" and provide written suggested revisions to the Philadelphia Electric Company as deemed appropriate and necessary by the Agency.
13. The Philadelphia Electric Company accepts the responsibilities outlined in Appendix 4, "Facility Responsibilities" to Annex E. These responsibilities establish the role of the facility in regard to preparedness for and response to incidents at the Limerick Generating Station and shall be adhered to as the established state/facility relationship for such incidents.
14. The Pennsylvania Emergency Management Agency and the Philadelphia Electric Company accept and shall adhere to the principles set forth in this Statement of Agreement.

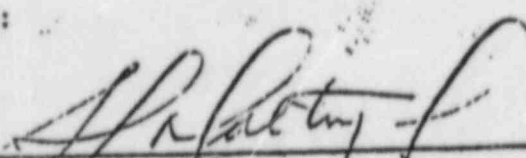
Sincerely,



John L. Patten
Director

Pennsylvania Emergency Management Agency

Agreed:


Shields L. Daltroff

DATE:

3/16/84

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKET
USNRC

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

'84 JUN -7 A10:32

In the Matter of

PHILADELPHIA ELECTRIC COMPANY

(Limerick Generating Station,
Units 1 and 2)

DOCKETING & SERVICE
SECTION
Docket Nos. 50-352
50-353

CERTIFICATE OF SERVICE

I hereby certify that copies of "Commonwealth of Pennsylvania's Response To "Revised Issues of Concern of The City of Philadelphia in the Area of Emergency Planning"" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, or, as indicated by an asterisk, through deposit in the Commonwealth of Pennsylvania's internal mail system, or, this 4th day of June 1984:

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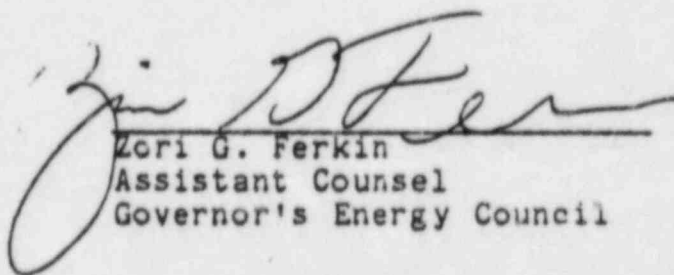
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Zori G. Ferkin
Assistant Counsel
Governor's Energy Council

Date: June 4, 1984